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TITLE : SEMICONDUCTOR INTEGRATED CIRCUIT

ABSTRACT : PURPOSE: To shorten the rise time of an inverter by using a floating gate MOFET in the load side of the inverter when MOSFET is integrated in a semiconductor chip to constitute an inverter circuit.

CONSTITUTION: Thick  $\text{SiO}_2$  or  $\text{Si}_3\text{N}_4$  insulating film 102 is caused to adhere to the circumference part on P-type Si substrate 101, and an inverter driving-side MOSFET consisting of source and drain regions 103 and 104 and gate insulating film 105 is formed on the surface of substrate 101 surrounded by film 102, and electrodes are provided in these regions. After that, when a load-side drain region 104, and electrode 107 is made common. Next, drain region 110 and gate insulating film 112 are provided, and electrodes are fitted to them respectively and are covered with insulating film 14. Thus, the floating gate element is connected to the driving-side element, thereby constituting an inverter.

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